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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
07/839,194	02/20/92	GORDON K	IG5-4.4

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EXAMINER	
CROUCH, D	
ART UNIT	**PAPER NUMBER**
1632	15

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 07/839,194	Applicant(s) Gordon et al.
	Examiner Deborah Crouch	Group Art Unit 1632

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *three (3)* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1, 2, 4-9, and 11* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1, 2, 4-9, and 11* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

In response to the remand of this application from the Board of Appeals as indicated in the office action mailed March 24, 1998, the finality of the office action mailed November 2, 1993 has been removed. Prosecution on the merits of claims 1-11 resumes. The declaration by Katherine Gordon, Ph. D., filed September 8, 1993 has been re-considered, but not found persuasive. Arguments presented in the Appeal Brief filed June 19, 1994 are answered to the extent applicable in view of the new rejections in this office action.

Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification provides only a description of one mammalian serum milk protein promoter, and that is the WAP promoter in ATCC Accession No. 67032. There is no description of any other WAP promoter or other mammalian milk serum protein promoter such that at the time of filing, 1986, it is evident that applicant had possession for the breadth of the claimed invention. Furthermore, the disclosure does not describe mammalian serum milk promoters for their breadth such that their structure could be envision by the skilled artisan at the time of filing.

In addition, it is important to note that the courts have support this concept of written description. *Vas-Cath Inc. v. Mahurkar*, 19 USPQ2d 1111, clearly states that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention*. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See *Vas-Cath* at page 1116).

With the exception of the WAP promoter of ATCC Accession No. 67032, referred to above, the skilled artisan cannot envision the detailed chemical structure of the encompassed promoters, and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere

statement that it is part of the invention and reference to a potential method of isolating it, or the mere reference to its starting material. It is noted that the specification discloses that other mammalian milk serum proteins were known in the art at the time of filing, and specifically indicates α-lactalbumin (specification page 4, lines 11-15). However, this is not seen as sufficient written description for the promoter, or a reduction to practice for the promoter as only the protein is disclosed. The promoter sequence is DNA and that sequence itself is required. See *Fiers v. Revel*, 25 USPQ2d 1601 at 1606 (CAFC 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016.

One cannot describe what one has not conceived. See *Fiddes v. Baird*, 30 USPQ2d 1481 at 1483. In *Fiddes*, claims directed to mammalian FGF's were found to be unpatentable due to lack of written description for that broad class. The specification provided only the bovine sequence.

Therefore, only the WAP promoter as contained in ATCC Accession No. 67042, but not the full breadth of the claim meets the written description provision of 35 U.S.C. §112, first paragraph. Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. §112 is severable from its enablement provision (see page 1115).

Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for DNA constructs containing a gene encoding a protein, said gene being under transcriptional control of the WAP promoter of ATCC Accession No. 67032, does not reasonably provide enablement for the breadth DNA constructs containing a gene encoding a protein, said gene being under transcriptional control of mammalian milk serum protein promoters. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. While the claims encompass an enormous number of nucleotide sequences, the specification only teaches a single WAP promoter DNA sequence. The specification provides no guidance as to DNA sequences, fragments of known DNA sequences or assays for determining milk serum protein promoter activity for the

breadth of claim. It is well established in case law that the specification must teach those of skill in the art how to make and how to use the invention as broadly claimed. *In re Goodman*, 29 USPQ2d at 2013 (Fed. Cir. 1994), citing *In re Vaeck*, 20 USPQ2d at 1445 (Fed. Cir. 1991). In not providing rudimentary guidance in the isolation of the genus "milk serum protein promoters', the specification does not enable the breadth of the claims. The identification of a single milk serum protein promoter DNA sequence is not sufficient enablement for Applicant's broadly claimed invention. Accordingly, as the specification provides insufficient guidance and "experiments in genetic engineering produce, at best, unpredictable results" (*Ex parte Forman*, 230 USPQ 546 (BPAI 1986)), it would have required one of skill in the art undue experimentation to prepare all milk serum protein promoters without a predictable degree of success.

Furthermore, the courts have stated that specifications are required to provide sufficient teachings and guidance to enable the skilled artisan to implement the invention as claimed. For example, *Genentech Inc. v. Novo Nordisk A/S*, 42 USPQ2d 1005 (CAFC 1997) (emphasis added) states:

> .... a specification need not disclose what is well known in the art. See, e.g., *Hybritech Inc. v. Monoclonal Antibodies*, Inc., 802 F.2d 1367, 1385, 231 USPQ 81, 94 (Fed. Cir. 1986). However, that general, oft-repeated statement is merely a rule of supplementation, not a substitute for a basic enabling disclosure. It means that the omission of minor details does not cause a specification to fail to meet the enablement requirement. However, when there is no disclosure of any specific starting material or of any of the conditions under which a process can be carried out, undue experimentation is required; there is a failure to meet the enablement requirement that cannot be rectified by asserting that all the disclosure related to the process is within the skill of the art. It is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement.

Thus in view of this holding, the lack of guidance in the specification as state above to provide guidance as to the methods for isolating milk serum protein promoters for their breadth, the specification is not seen as enabling, and that at the time of filing the skilled artisan would need to engage in an undue amount of experimentation without a predictable degree of success to implement the claimed invention for its breadth.

The declaration by Dr. Gordon is not persuasive as it is not clear, if the WAP promoter used to produce transgenic mice expressing tPA (parag. 6) is the same as that in the disclosed species in ATCC Accession No. 67032. If it is not, then this would lend to the broadening of the scope of enablement

regarding the promoter. With regards to the breadth of "mammalian milk serum protein promoters", the only reference is to Dr. Gordon's comment in parag. 3, that she disagrees with the examiner's evaluation of the guidance in the specification. In view of case law of record now, more that a mere statement of disagreement is needed. Applicant should show where in the specification such guidance is given and how the skilled artisan at the time of filing would use such guidance to reach the claimed invention. While there is no doubt to the enablement of the very specific mouse of the declaration, there is a lack of guidance for the breadth of the claimed invention.

In the Appeal Brief filed June 29, 1994, applicant argues that the genomic sequence for α-lactalbumin was known in the art at the time of filing. However, the mere knowledge of a genomic sequence does not put in the hands of the public the promoter sequence(s). Such a disclosure constitutes an invitation to invent. This is especially the situation in view of the case law cited in this office action. While inventors are encouraged by the patent system to disclose early, those disclosures must be enabled and contain adequate written descriptions of the inventions such that the public is given adequate guidance to make and use the invention.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are confusing as to " a DNA sequence of a mammalian milk serum protein promoter". It is confusing as what applicant is claiming, that is the DNA sequence the promoter or a sequence of the promoter which does not have promoter activity. A suggested alternative is " ... under transcriptional control of a mammalian milk serum protein promoter sequence which does not naturally ....".

It is also suggested that applicant use "comprising" instead of "containing" to eliminate any confusion over opened or closed language.

The claims are free of the prior art. At the time of filing, the prior art did not teach or suggest a DNA construct containing a gene encoding a protein where expression of the gene is regulated by a

mammalian milk serum protein promoter, where the promoter does not naturally regulate expression of the gene, and the construct further comprising a DNA sequence encoding a signal peptide.

U.S. Patents 5,476,995; 5366,894 and 5,322,777 are cited as of interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Crouch, Ph.D. whose telephone number is (703) 308-1126.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

The fax number is (703) 308-4242.

Please note the change in art unit number to Art Unit 1632. Please use this art unit number on all correspondence.

Deborah Crouch

DEBORAH CROUCH
PRIMARY EXAMINER
GROUP ~~1800~~ 1630

Dr. D. Crouch
April 29, 1999